APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/458,322	12/10/1999	STEPHEN J. ZACK	533/198	8722

26291	7590	05/06/2004

MOSER, PATTERSON & SHERIDAN L.L.P.
595 SHREWSBURY AVE, STE 100
FIRST FLOOR
SHREWSBURY, NJ 07702

EXAMINER
HUYNH, SON P

ART UNIT	PAPER NUMBER
2611	

DATE MAILED: 05/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>03</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>02 March 2004</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>32-44</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>32-44</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>02 August 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☒ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments filed 3/2/2004 have been fully considered but they are not

persuasive.

Applicant argues Adam does not teach or suggest the feature "wherein said multiplex

switches further for formatting non-content data and for selectively multiplexing

formatted non-content data into said output stream." (page 7, lines 17-19, page 10, lines

3-4). The examiner respectfully disagrees.

Adam discloses at least one application server 202 coupled to a network controller 204.

As an example, the application data can be stored and transmitted in Internet Protocol

(IP) format (col. 3, lines 41-45 and figure 2). Network controller 204 passes application

data to multiplexer 208 (figure 2). Multiplexer 208 includes application buffer 402 and

selector 404. Application data stored in buffer 402 is preferably in the form of an MPEG-

2 transport packet (col. 4, lines 45-49). Selector 404 selects application data from

application buffer 402 and passes to selector tx processor 408 via output buffer for

transmitting to receiving side (figure 4 and col. 4, line 52+). Clearly, the multiplexer

switches (208) for formatting non-content (into MPEG-2 transport packet) and

selectively multiplexing formatted non-content data into an output stream.

For reason given above, the rejection for claims 32-44 is maintained as repeatedly

discussed below.

Claims 1-31have been cancelled.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1.   Claims 32- 33, 36-41 and 43-44 are rejected under 35 U.S.C. 102(e) as being

anticipated by Adams (US 6,044,396).

Regarding claim 32, Adams teaches an information distribution system comprising

server equipment (server source 115) for providing both content and non-content data

(video data and application data) to subscriber equipment (terminal nodes 105), the

server equipment comprising:

a multiplex switch for multiplexing a plurality of formatted content (preferably in MPEG-2

– col. 4, line 35+) from server modules to produce an output stream streams (video

streams from media servers 200) that is adapted for transport via a communication

channel, wherein the multiplexing of the formatted content streams is statistically

performed; wherein the multiplex switch is further for formatting non-content data

(application data, application programs and control information) and for selectively

multiplexing formatted non-content data into the bandwidth availability basis that is

predicted based on the multiplexing of the formatted content streams (application data

stored in application buffer 402 is preferably in the form of an MPEG-2 transport packet

–col. 4, line 45+; statistical multiplexer 208 multiplexes a plurality of encoded video

streams from media servers 200 and forwards the video streams to modulator 210 for

transmission over a channel in the network 110; The data stored in each buffer slot is

preferably in the form of an MPEG-2 transport packet; the statistical multiplexer also

determines if video buffers 400 in media servers 200 are empty, the selector passes

data from the application buffer 402 to the output buffer 406 for transmission over a

channel in the network 110 – see figures 2, 4 and col. 3, line 40+).

Regarding claim 33, Adams teaches the multiplex switch includes a buffer for storing

non-content data and a switch controller for determining a bandwidth utilization level of

the multiplex switch, the switch controller further for causing at least a portion of the

non-content data in the buffer to be multiplexed into the output stream when the

bandwidth utilization level falls below a threshold utilization bandwidth level (statistical

multiplexer comprises application buffer 402 for receiving the application data stream

from the network controller 204, the selector 404 couples to video buffers 400 and

application buffer 402 and decides which data stream is to be given access to a channel

of the network 110. The video streams are given higher priority than the application

data. The selector allocates the application data stream to a low priority access to the

network. Therefore, if and when all video buffers 400 are empty, the selector 404

passes data from the application buffer 402 to the output buffer 406 for transmission on

the channel of the network 110 – see figure 4 and col. 4, line 35+).

Regarding claim 36, Adams teaches the non-content data comprises control data

(control information) and non-control data (application data and application programs),

and the multiplex switch preferentially multiplexes the non-content control data (see col.

3, lines 40-52, col. 4, lines 57-64, col. 6, lines 61-67).

Regarding claim 37, Adams teaches the non-content data comprises control data

(control information) and non-control data (application data and application programs),

and the multiplex switch preferentially multiplexes the control data (see col. 3, lines 40-

52, col. 4, lines 57-64, col. 6, lines 61-67).

Regarding claim 38, Adams teaches the content data includes MPEG data (see col. 4,

lines 48-49; col. 5, lines 14-45).

Regarding claim 39, Adams teaches the non-content data includes Internet protocol

data (see col. 3, lines 43-44).

Regarding claim 40, the limitations of the method as claimed correspond to the

limitations of the system as claimed in claim 32 and are analyzed as discussed with

respect to the rejection of claim 32.

Regarding claim 41, Adams teaches storing non-content data until bandwidth availability

enables multiplexing of the stored non-content data (application data is stored in

application buffer 402. If and when all video buffers 400 are empty, the selector 404

passes data from the application buffer 402 to the output buffer and the application

data, application program, control information are transmitted in waste bandwidth – see

col. 5, lines 1-8, col. 6, lines 63-67).

Regarding claim 43, Adams teaches the output stream in an MPEG data stream (col. 4,

lines 48-49; col. 5, lines 13-14).

Regarding claim 44, Adams teaches receiving the non-content data in an Internet

protocol format (col. 3, lines 43-44).

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.   Claim 34-35 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable

Adams (US 6,044,396).

Regarding claim 34, Adams teaches a system as discussed in the rejection of claim 33.

Adams further discloses multiplexer 208 selects the packets or ATM cells to be

forwarded to a modulator 210 (col. 3, lines 63-64); real time constraints on the display of

video data; and the selector 404 selects data from the video buffers 400 in round robin

fashion to ensure fair allocation to the network 110 (col. 4, line 54+). However, Adams

does not specifically disclose the threshold bandwidth utilization level comprises a

utilization level sufficient to process a single time extent, wherein the content streams

are divided into a plurality of respective time extents. It is obvious to one of ordinary skill

in the art that the threshold bandwidth utilization level comprises a utilization level

sufficient to process a single time extent, wherein the content streams are divided into a

plurality of respective time extents in order to reduce delay in real time data

transmission thereby improve efficiency in quality of service.

Regarding claim 35, Adams teaches a system as discussed in the rejection of claim 33.

Adams further discloses multiplexer 208 selects the packets or ATM cells to be

forwarded to a modulator 210 (col. 3, lines 63-64); real time constraints on the display of

video data; and the selector 404 selects data from the video buffers 400 in round robin

fashion to ensure fair allocation to the network 110 (col. 4, line 54+). However, Adams does not specifically disclose each of the content streams is divided into a plurality of respective time extents, and the multiplex switch can multiplex a predetermined number of time extents into the output stream. It is obvious to one of ordinary skill in the art that each of the content streams is divided into a plurality of respective time extents, and the multiplex switch can multiplex a predetermined number of time extents into the output stream in order to improve efficiency in data transmission.

Regarding claim 42, the limitations of the method as claimed correspond to the limitations of the system as claimed in claim 35 and are analyzed as discussed with respect to the rejection of claim 35.

Conclusion

4.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kim et al. (US 5,521,927) teaches elementary stream packetizing unit for MPEG-2 system.

Birch et al. (US 5,757,416) teaches system and method for transmitting a plurality of digital services including imaging services.

Nakamura et al. (US 6,064,796) teaches method and apparatus for encoding video data for seamless connection using flags to indicate top or bottom of field and whether field is presented plural times.

Katto (US 6,584,125) teaches coding/decoding apparatus, coding/decoding system and multiplexed bit stream.

5.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Son P Huynh whose telephone number is 703-305-1889. The examiner can normally be reached on 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Andrew Faile can be reached on 703-305-4380. The fax phone number for

the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Son P. Huynh
April 28, 2004

VIVEK SRIVASTAVA
PRIMARY EXAMINER